

Amendments to the Claims

1. (Currently Amended) System for enhancing security of e-mails transmitted from a sender to a receiver over a data transmission network, comprising:

a Message Transfer Agent (MTA) associated with said sender for transmitting over said network an original e-mail sent by said sender;
said MTA associated with said sender including a message splitting means adapted to divide said original e-mail into a plurality of chunks according to a predetermined algorithm and a predetermined list of relay MTAs to which are forwarded said plurality of chunks; and

a chunk assembly agent for receiving from said relay MTAs the plurality of chunks and for re-assembling the plurality of chunks using said predetermined algorithm in order to re-build said e-mail before sending it to said receiver.

wherein each of said plurality of chunks is transmitted as a chunk e-mail having a same destination e-mail address, the destination e-mail address comprising an e-mail address of the chunk assembly agent.

2. (Cancelled).

3. (Currently Amended) The system according to claim 1 [[2]], wherein each of said plurality of chunks is encrypted using a public key of said chunk assembly agent before being transmitted over said network.

4. (Currently Amended) Method for enhancing security of e-mails transmitted from a sender to a receiver over a data transmission network wherein a Message Transfer Agent (MTA) associated with said sender is in charge of transmitting an original e-mail sent by said sender, comprising:

dividing said original e-mail into a plurality of chunks using an algorithm,
sending said chunks as e-mails over said network to different relay MTAs

defined in a predetermined list of relay MTAs, and

re-assembling by a chunk assembly agent said chunks in order to re-build said original e-mail by using said predetermined algorithm, before sending said original e-mail to said receiver,

wherein each of said chunks is transmitted as a chunk e-mail having a same destination e-mail address, the destination e-mail address comprising an e-mail address of the chunk assembly agent.

5. (Cancelled).

6. (Previously Presented) The method according to claim 4, wherein each chunk is encrypted using a public key of said chunk assembly agent before being transmitted, said encrypted chunk e-mail being decrypted when received by said chunk assembly agent using a private key.

7. (Previously Presented) The method according to claim 6, wherein text of said original e-mail is encrypted by using the public key of said receiver before being divided into a plurality of chunks.

8. (Currently Amended) A security system, comprising:

a Message Transfer Agent (MTA) associated with a sender for transmitting over a network an original e-mail sent by the sender, the MTA including a message splitting system for dividing the original e-mail into a plurality of chunks according to a predetermined algorithm and for forwarding the plurality of chunks to a plurality of relay MTAs; and

a chunk assembly agent for receiving from the relay MTAs the plurality of chunks and for re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail before sending it to a receiver,

wherein each of said plurality of chunks is transmitted as a chunk e-mail having a same destination e-mail address, the destination e-mail address comprising an e-mail address of the chunk assembly agent.

9. (Cancelled).

10. (Currently Amended) The system according to claim [[9]] 8, wherein the message splitting system encrypts each of the plurality of chunks using a public key associated with the chunk assembly agent.

11. (Currently Amended) A security system, comprising:

a chunk assembly agent for:

receiving from a plurality of relay Message Transfer Agents (MTAs) over a network a plurality of chunks of an original e-mail that has been divided into the plurality of chunks according to a predetermined algorithm,

wherein each of said plurality of chunks has a same destination e-mail address, the destination e-mail address comprising an e-mail address of the chunk assembly agent; and

re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail before sending it to a receiver.